

AMENDMENT
U.S. Appln. No. 09/630,777

be obvious under 35 U.S.C. § 103 (*see, In re Antonie*, 195 USPQ 6 (CCPA 1977)). In the present case, the fact that the primer layer film has an energy band gap larger than that of the photocatalyst film is a property of the presently claimed article that cannot be overlooked.

The Examiner has acknowledged that Inoue is silent with respect to energy band gaps. The Examiner, however, notes that Nakanishi suggests semiconductor photocatalysts with different membranes varying in band gap energy, and the Examiner concludes that it would have been obvious to combine the teachings of the two references in order to arrive at the presently claimed invention.

Applicants respectfully disagree.

Nakanishi suggests a semiconductor comprising two or more membrane-like semiconductors different in band gap energy arranged "in the order large in band gap energy from an incident light side" (*see, its English-language abstract*). In other words, Nakanishi suggests an article comprising two or more photoconductor layers having different energy band gaps, such that the layers are superposed in decreasing order of energy band gap from the incident light side. Nakanishi discloses, as a specific example of the arrangement, a CdS membrane (energy band gap of 2.4 eV) formed on a quartz substrate and a TiO₂ membrane (energy band gap of 3.0 eV) formed thereon.

Thus, the energy band gap relationship between the first and second membranes of Nakanishi is actually the opposite of the relationship between the presently claimed primer layer and photocatalyst film layer.

It is well-settled that the prior art must be considered in its entirety, i.e. as a whole, and any portions therein that would lead away from the claimed invention is evidence of nonobviousness (*see, W.L. Gore & Assoc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983)). Nakanishi actually teaches away from the presently claimed energy band gap relationship.

At least for the foregoing reason, Applicants respectfully request that the Examiner reconsider and withdraw this §103 rejection.

II. Paragraph Nos. 4-5: Rejection Under 35 U.S.C. § 103

Claims 7-9 are rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Inoue in view of Nakanishi, WO 9827021 ("WO '921"), and EP 0 820 967 A1 ("EP '967").

Applicants' Response

Both WO '021 and EP '967 are silent with respect to the presently claimed energy band gap relationship. Claims 7-9 depend from claim 1, which includes the recitation of the energy band gap relationship. Therefore, as explained above, Nakanishi actually teaches away from the presently claimed energy band gap relationship, and WO '921 and EP '967 do not cure this deficiency of the cited art.

Furthermore, a proper analysis under §103 requires, *inter alia*, consideration of whether the prior art would have suggested to those of ordinary skill in the art that the prior art should be modified in order to arrive at the claimed invention. It is essential that the Examiner find some motivation or suggestion to make the claimed invention in light of the prior art teachings. The mere possibility that the prior art may be modified so as to arrive at the claimed invention does not render obvious the invention unless the prior art suggested (for any reason) the desirability of such a modification. Indeed, the suggestion to modify must be "clear and particular" (*see, In re Sang Su Lee*, 2002 U.S. App. LEXIS 855 (Fed. Cir. 2002); *Winner Int'l Royalty Corp. v. Ching-Rong Wang*, 53 USPQ2d 1580, 1586-1587 (Fed. Cir. 2000)).

Applicants respectfully submit that one skilled in the art would not have been motivated to combine WO '121, EP '967, and Nakanishi. Moreover, even if WO '021 and EP '967 are combined with Nakanishi, the skilled artisan is not led to the technical concept of the presently claimed invention.

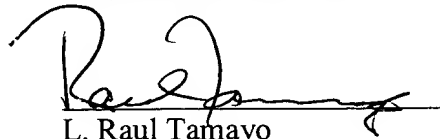
For at least the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw this §103 rejection.

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III. Conclusion

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "L. Raul Tamayo", is written over a horizontal line.

L. Raul Tamayo
Registration No. 47,125

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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